

Applicant: Gregory B. Moskon  
Serial No.: 10/021,791  
Filing Date: December 7, 2001  
Attorney Docket No.: AMPC 5017

Art Unit: 2571  
Confidentiality No.: 2433  
Examiner: Alexis R. Jankus

### Remarks

The application as originally submitted and as amended contains nine claims. The Examiner's objection to claims 5 and 8 under 37 CFR 1.75(c) as being in improper form has been addressed by the claims amendment above.

The Examiner's rejection of claims 1-4, 6, 7 and 9 on the basis of 35 U.S.C. 102(b) and the referenced article by Cheney et al., requires further clarification and explanation. The step of "pseudo-random selection from available data files" and the step of "nested fidelity" alone or combined form key elements of the method described in each of the nine claims. As is more fully discussed below, the Cheney reference neither teaches nor suggests these specific solutions to the current problems with such computer-generated environments. After reviewing the analysis below, it would be most helpful if the Examiner would more clearly articulate how the discussion in Cheney anticipates these two key steps by themselves and then in combination with the other steps of each claim.

#### ISSUE 1: Pseudo-Randomness

A critical element of the independent claim number 1 is the "pseudo-random selection from available data files" for incorporating environmental components. On page 3, lines 12-13, this term is initially defined as "randomness within preset rules." A fuller definition is found on page 5,

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lines 21-24. That entire paragraph emphasizes that this pseudo-randomness has nothing to do with mathematical or computer generated randomness. It concerns the use of rule sets to establish what components are instantiated, where they are instantiated, and their interaction with the environment and other components, as well as component features such as geo-specific or cultural requirements.

In contrast, the Chenney reference addresses none of this. Chenney limits its own teaching to addressing the "consistency problem." (See page 16, section 1, penultimate paragraph.) That problem addresses how the environment should look over certain time gaps which may occur as areas lapse from view. Section 2.3 on page 17 of Chenney uses the term "random intervals" solely to discuss this consistency problem. That reference has no relationship whatsoever to the term "pseudo-random" as defined for this application. The second section referenced by the Examiner, page 18, section 3.3, again contains the term "random" in two places. However, the term is used solely to discuss the point in time for building stationary distributions. That discussion has no relationship to the definition of "pseudo-random" as employed in the present application.

It is emphasized that the term "pseudo-random" as defined in this application is not employed for the computation or generation of values. It is used to control the existence, appearance, interaction, and nature of environmental components such that they give the desired degree of realism and unpredictability/predictability that most closely approximates the

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conditions desired by the user. This is accomplished by the use of rule sets applicable to the specific application.

This pseudo-random step, in combination with instantiating areas of the environment only as needed and then allowing unnecessary areas to lapse, creates an independent claim 1 which is unique and not taught by any art of record to date.

## ISSUE 2: Nested Fidelity

The Examiner's rejection equated the term "nested fidelity" in this application with the Chenney concept of "causality." Chenney's only concern with the "causality" issue was how something should look after a gap in time. Chenney's causality issue has no relationship to the step of "nested fidelity" as that term is defined in this application. Chenney's gap in time issue is addressed by the current application separately and apart from nested fidelity. Accounting for environmental dynamics during lapses is addressed at page 5, lines 6-19 and pages 11-12, lines 21-2. In contrast, the concept of "nested fidelity" is addressed at pages 6-7, lines 14-2 and page 12, lines 4-29.

The concept of giving a component a certain "level of detail" is standard in the industry. However, that concept has been limited to the appearance of the object as presented to the device or person perceiving it and with respect

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to distance or time. No reference cited has advanced that concept to investing an object with a potentially unlimited level of detail (even down to the subatomic level) via the uniquely defined step of nested fidelity let alone combining it with the three steps in claim 1. The synergism of the three steps in claim 1 with the nested fidelity step creates the potential for unlimited detail environments at a fraction of the usual time and cost associated with traditional methods of generating such environments.

The Cheney reference does not appear to have even contemplated these issues, let alone proposed these solutions.

### ISSUE 3: Uniqueness of the Overall Method

In addition to the two very unique steps discussed above, the claims of this application present a unique, synergistic combination of steps which have the potential to provide a lower cost, more effective solution to the current problems with computer-generated environments as identified by the application and the Examiner's references. In lieu of the tradition upfront establishment of certain environments and components (which are then called up as needed), the method of this application employs data files and rule sets on an as-needed basis to create non-repetitive and potentially unlimited realistic environments which can be tailored to specific geo-specific or cultural requirements, as well as any number of other variables.

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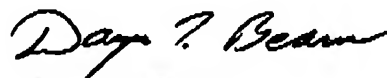
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In conclusion, no teachings could be found within the referenced prior art which teach the specific combination of steps employed by the current application for the solution of long-standing weaknesses in computer-generated environments.

As the method described in the claims of this application does not appear to be taught by any known reference, it represents valuable intellectual property rightfully belonging to the United States Government on assignment from our employee-inventor. We welcome the Examiner's further assistance in protecting that property and assuring that any potentially allowable claim(s) will withstand any subsequent challenges. It is, therefore, respectfully requested that the Examiner allow the amended claims or further clarify the basis for rejection in light of the above remarks.

The undersigned may be contacted at telephone number (256) 876-8195 regarding future prosecution of this application.

Respectfully,



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